

Seton Hall University eRepository @ Seton Hall

Seton Hall University DNP Final Projects

Seton Hall University Dissertations and Theses

Fall 12-21-2017

Debriefing with Reflection: Best Practice for Learning in Simulation in Pre-Licensure Nursing Education

Mary McDermott
mary.mcdermott1@shu.edu

Follow this and additional works at: <https://scholarship.shu.edu/final-projects>



Part of the [Interprofessional Education Commons](#), and the [Nursing Commons](#)

Recommended Citation

McDermott, Mary, "Debriefing with Reflection: Best Practice for Learning in Simulation in Pre-Licensure Nursing Education" (2017).
Seton Hall University DNP Final Projects. 20.
<https://scholarship.shu.edu/final-projects/20>

Debriefing with Reflection: Best Practice for Learning in Simulation in
Pre-Licensure Nursing Education

By

Mary McDermott

DNP Scholarly Project Committee

Dr. Mary Ellen Roberts

Dr. Maureen Byrnes

Dr. Donnean Thrall

Submitted in partial fulfillment of the requirements for the degree of

Doctor of Nursing Practice

Seton Hall University

2017

Copyright © 2017
Mary McDermott
All Rights Reserved

Debriefing with Reflection: Best Practice for Learning in Simulation in

Pre-Licensure Nursing Education

By

Mary McDermott

DNP Scholarly Project Committee

Dr. Mary Ellen Roberts

Dr. Maureen Byrnes

Dr. Donnean Thrall

Approved by the DNP Scholarly Project Committee:


Dr. Mary Ellen Roberts-Chairperson

Date: 9/20/17


Dr. Maureen Byrnes

Date: 9/20/17


Dr. Donnean Thrall-Mentor

Date: 9/20/17

Submitted in partial fulfillment of the requirements for the degree of

Doctor of Nursing Practice

Seton Hall University

2017

Dedication

To my husband Dan, through thick and thin does not even begin to cover it. I love you.

To my three beautiful tenacious children you make me proud very day.

To my remarkable mother who is my inspiration for never saying never.

For you dad, my biggest fan, I know you are so very proud.

Acknowledgement

I would first like to thank my doctoral committee, Dr. Roberts for your constant support and guidance and Dr. Maureen Byrnes your positive affirmation and kindness was so appreciated. Little did I know five years ago the first person at SHU who wished me luck on my journey would be the reader for my project. Dr. Donnean Thrall my 'meant to be' mentor. I am so fortunate to have you in my life. Your work with Dr. Watson is an inspiration. I am so grateful for your patience and wisdom.

A special thanks to my Department Chair Donna Healy and current nurse educator colleagues. Thank you for participating in and supporting this initiative, what a caring group we have become, you are all very dear to me. I would also like to acknowledge the many people who have been instrumental in supporting this journey. To my dear friends Tracey, Mary, Cathy, Maryjane and so many others; where would I be without your unwavering support and friendship.

Finally, it is important that I acknowledge all of my nursing experiences. The miraculous premature infants who are now adults; the kind mentors I have had throughout my career and the transformative transition into nursing education. Each and every experience has added to this amazing journey of self-awareness and has contributed to the nurse I am today. There are no coincidences in life. I am grateful to you all.

Table of Contents

Abstract.....	5
SECTION I: BACKGROUND	7
SECTION II: LITERATURE REVIEW	16
SECTION III: THEORETICAL FRAMEWORK	21
SECTION IV: METHODOLOGY	23
SECTION V: PROJECT OUTCOMES.....	31
SECTION VI: SUMMARY AND RECOMMENDATIONS	36
SECTION VII: CONCLUSION	39
References	40
Appendix A: Definition of Terms	48
Appendix B: Debriefing with Good Judgment Model.....	49
Appendix C: Debriefing using Advocacy-Inquiry Method	50
Appendix D: DASH © Instructor Tool.....	51
Appendix E: Faculty Questionnaire	54
Appendix F: Simulation Evaluation Tool	55
Appendix G: Structured Pre-brief Tool	56
Appendix H: Incomplete Document	58

Abstract

Purpose: The purpose of this project was intended to transform the outdated method of conducting debrief after simulation by implementing a good judgment model and integrating the concept of “advocacy-inquiry.” This implementation was expected to reduce demoralizing and anxiety producing debrief experiences and improve student reflection and learning in order for students to more deliberately link theory with practice.

Significance: The debrief is often recognized as the component of simulation in which the most effective learning occurs. It is the time when students are provided opportunity to reflect on thoughts, actions and behaviors. Unfortunately, many nursing students often experience undue stress during simulation resulting in limited comprehension of how they did or did not meet outcomes. Students have expressed feeling judged during simulation thus; making it difficult to allow themselves to feel vulnerable enough to fully reflect on why they made mistakes.

Methods: Realizing that a caring supportive model may improve student engagement and critical thinking Jean Watson’s Theory of Human Caring was recognized as a solid foundation in which to build this initiative. Utilizing best practices set forth by the Center for Medical Simulation (CMS) and INACSL (The International Nursing Association for Clinical Simulation and Learning) several new concepts and tools have been integrated into the simulation debriefing process. Importantly, faculty have been provided training in methods in which to successfully debrief so students are able to reflect on the simulation experience. The “debriefing with good judgment” model (Rudolph, Simon, Dufresne & Raemer, 2006) as well as the method of debriefing using “advocacy-inquiry” (Rudolph, Simon, Rivard, Dufresne, Raemer, 2007) are two such tools which guided the faculty to ensure a consistent reflection process. This process assisted students in recognizing and resolving clinical dilemmas identified during the simulation.

Findings: Of 125 students in the spring 2017 cohort the vast majority identified positive changes in the simulation experience. Several students commented on “improved learning and insight” as well as an appreciation for the “focus on reflection.” Students also recognized that simulations were now “less judgmental than previous simulations” affirming the importance of integrating the “debriefing with good judgment” model (Rudolph, et al, 2006). The faculty identified that integrating the good judgment model and advocacy-inquiry tool into the debrief did result in improved student engagement. Overall students appeared to be less anxious and more reflective during the debrief process.

Conclusion: This initiative proved to be a successful intervention in increasing student reflection and participant satisfaction. This paper will discuss the successful transformation of the simulation debriefing process at one academic institution.

SECTION I: BACKGROUND

Debriefing is an essential component of simulation and is considered by many to be the most important element of the simulation experience. Debriefing is an activity which connects theory to practice in a safe environment where students are provided opportunities to collaborate, think critically and problem solve. Despite the benefits, many students experience self-doubt in their clinical skills and heightened anxiety levels during the simulation which potentially affects critical thinking and decision making. Lasater (2007) reported that students experienced heightened anxiety levels while in simulation, particularly related to the anticipation of an unexpected event. Self-doubt and heightened anxiety may make problem solving more difficult and may reflect in a student's inability to meaningfully participate in the debrief. Fey (2014) asserts a link between facilitators' actions and the reflective ability of learners. This reinforces the importance of training in debriefing techniques as a requirement for debriefing facilitators.

In order for students to feel psychologically safe enough to engage in reflection it was necessary for faculty to become knowledgeable facilitators of the debrief process. "Instructors often avoid giving voice to critical thoughts and feelings because they do not want to seem confrontational. They worry that criticism might lead to hurt feelings or defensiveness on the part of the student" (Rudolph et al., 2006 p.52). Additionally, Nurse educators often expect students to demonstrate successful transfer of what they have learned and experienced from one situation to the next. These assumptions regarding a student's ability to transfer theory into practice may result in diminished self-confidence. Harjai and Tiwari (2009) suggest that a student's difficulty in translating knowledge and theory into practice may be due to lack of exposure needed to use this knowledge successfully, again, reinforcing the necessity for knowledgeable debrief facilitators.

Dreifuerst (2009) emphasizes learning as occurring in simulation through task training and repetition. Empirical evidence supports the notion that significant learning occurs through reflection during debriefing. Acknowledging that debriefing, is arguably the most important element of the simulation experience; the critical component in which students have the potential to learn from the simulation, it was crucial to ensure instructors had the tools in which to facilitate psychologically safe and effective debrief.

A recent survey of pre-licensure nursing programs in the United States determined that use of theory-based debriefing by competent debriefers is not the norm (Fey, 2014). Results from the study indicated that only 31 percent of schools use a theory or model to guide debriefing. Less than half of all facilitators have had any training and just 19 percent have had their competence assessed (Fey, 2014). Additionally, poorly conducted debriefing has the potential to result in persistent poor clinical judgment (Jeffries, 2012). This concept may directly affect the connection between student reflection, nursing practice and patient safety.

Project Purpose and Description

The purpose of this project was intended to transform the outdated method of conducting debrief after simulation by implementing a good judgment model and integrating the concept of “advocacy-inquiry.” This implementation was expected to reduce demoralizing and anxiety producing debrief experiences and improve student reflection and learning.

The simulation experience is made up of three interwoven components, all necessary for successful learning to occur. The pre-brief sets the stage for the simulation. In the pre-brief students are often expected to prepare by reviewing a video or a textbook chapter followed by information about the simulation possibly in the form of a patient report. The second phase is the simulation itself which consists of a high or low fidelity mannequin, a detailed scenario and an

evaluation tool. The third or final phase is that of the debrief. Debriefing provides opportunities to foster reflective learning, encompassing the ability to “think-in-action as well as think-on-action” (Schön, 1983 p. 68). In this phase students discuss the simulation experience. If the debrief is facilitated by trained instructors, students should know that they are psychologically safe and errors will not be judged harshly. Students reflect on the process and come to a clinical conclusion. Team work and collaboration are natural components and reflection is the key.

The aim of this project was not only how to improve the learning experience for students but also how to integrate the philosophy of caring so that students felt safe to fully participate. For simulations to be most effective in nursing education, interactions with faculty have to reflect “caring, nurturing, and unbiased feedback if they are to increase the efficacy of this strategy and to provide maximal benefit to students’ learning” (Cantrell, 2008 p. 22).

Project Implementation

The project began by identifying current research and data regarding the most effective methods in which to facilitate debriefing. New concepts were introduced such as the difference between non-judgmental debriefing and “debriefing with good judgment” (Rudolph et al., 2006). (Appendix B) as well as the method of advocacy-inquiry (Appendix C). The Debriefing Assessment for Simulation in Healthcare or DASH © tool was recognized as an integral component for use by faculty as its purpose is to evaluate and develop debriefing skills. (Appendix D).

In order to implement best practice to transform the simulation process buy-in would be needed. Fortunately, the Department Chair was ready for this change, she had shown interest in the research and was up to date on the International Nursing Association for Clinical Simulation and Learning (INACSL) standards of best practice including Standard IV: The Debrief. While

there are six INACSL standards for simulation standard IV was the most relevant to this initiative as it encompasses the following criteria:

1. facilitated by a person(s) competent in the process of debriefing.
 2. conducted in an environment that is conducive to learning and supports confidentiality, trust, open communication, self-analysis, feedback, and reflection.
 3. facilitated by a person(s) who can devote enough concentrated attention during the simulation to effectively debrief the simulation-based experience.
 4. based on a theoretical framework for debriefing that is structured in a purposeful way.
 5. congruent with the objectives and outcomes of the simulation-based experience.
- (INACSL, 2016).

A brief seven question questionnaire (Appendix E) was prepared and disseminated among eight faculty members. All participants completed the questionnaire. The results of the questionnaire identified that all faculty members supported participation in a practice initiative to transform the simulation process based on best practice.

One participant did request clarification regarding revision of the pass/fail component after it was explained that a focus on student accountability would encourage student participation versus a pass fail method. Two participants who did not facilitate simulations were willing to learn more however would not require training. With faculty buy-in secured in the spring of 2016 the initiative formally began.

Goals and Objective

Two goals of this DNP initiative were identified; first, improve student debrief experience thereby increase reflection and learning. Secondly, faculty facilitation of simulations needed to be standardized utilizing the model of “debriefing with good judgment” the “advocacy-inquiry” concept and the self-guided DASH © tool. Objectives included increased student participation, improved reflective thinking and positive student and faculty feedback. Meeting these objectives required the following:

- modification of current guidelines
- integration of the aforementioned tools
- revision to the current simulation evaluation tool and
- a process to standardize debriefing.

One overarching objective was to educate the faculty and students regarding new guidelines and debriefing process. This objective was to ensure that faculty and students had the knowledge and skills necessary for optimal debriefing following a simulation experience.

Improving Student Experience

Education regarding the new process, standardization of pre-simulation expectations as well as consistency in how simulations were facilitated were expected to improve the simulation experience. Additionally, the importance of team work and collaboration was reinforced by partnering the students during the simulation with the anticipated outcome of improved trust and openness during the debrief.

Standardizing Faculty Facilitation

The intended outcome of standardizing the simulation and debrief processes was to ensure consistency with all simulation experiences. Consistency was expected to decrease students’ anxiety of the unknown and create an environment of trust with the concept of human caring at its core. Faculty were introduced to the framework of “debriefing with good judgment and the

concept of ‘advocacy-inquiry’. The DASH © tool was provided for faculty to identify strengths and weaknesses in facilitating the debrief.

Significance of Project

The significance of this initiative is that by creating a psychologically safe environment for student learning, student confidence and reflective decision making will improve. These behaviors will hopefully transfer with them as new graduates translating to improved patient outcomes and an increase in teamwork and collaboration. This initiative will result in the improvement of reflective and critical thinking; mirroring by faculty of a caring model and reinforcement of the necessity of team work and collaboration as components of what makes a competent Registered Nurse (RN). Furthermore, feedback and reflection are essential to professional development at all levels and are linked to professional nurse competencies (Babenko-Mould, Andrusyszyn, & Goldenberg, 2004).

Of significance, this project supports best practice of simulation and debriefing as defined by INACSL and the Center for Medical Simulation (CMS). The integration of the “debriefing with good judgment” approach is designed to increase the opportunity for students to hear and process what the instructor is saying without being defensive or trying to guess what the instructor’s clinical judgment is (Rudolph, Simon, Dufresne & Raemer, 2006). When faculty correctly utilize a good judgment model students are able to be open and reflective to possible mistakes and analyze thoughts and behaviors from the simulation process. Recognizing and reflecting on mistakes allows students the vulnerability to verbalize and acknowledge mistakes and encourages students to reflect on coming to the correct or a better solution or outcome.

Significance to Nursing Care

Due to increasing morbidity and mortality, nurses and other health care professionals are under increased scrutiny to provide safe, effective care. Likewise, nursing education programs are faced with increased pressure to produce graduates who are capable of providing safe patient care (Durham & Alden, 2008). It is unrealistic to expect that graduates from nursing programs have been provided all they need to know to ensure patient safety simply through traditional didactic learning and one or two clinical experiences a week. Durham and Allen (2008) further opine simulation as a teaching strategy can contribute to patient safety and optimize outcomes of care, providing learners with a safe, supervised setting without posing a risk to a patient.

Significance to Patient Safety

The 2006 Institute of Medicine (IOM) report, Preventing Medication Errors, identifies at least 1.5 million preventable medication errors occur each year in the United States.

Incorporating medication administration into simulation scenarios offers numerous learning opportunities. Understanding the rationale for medication use is improved as students are able to see how medications fit into the treatment of a variety of conditions. (Durham & Alden, 2008).

In a common scenario two students act as collaborative RN's working together to review provider orders, obtain the appropriate medications from the dispensing unit, scan the patients arm bracelet and administer the medication via the necessary route. If errors are made reconciliation occurs during the debrief phase at which time the students support one another, reflect on the situation and identify the necessity of one medication over another. The students focus on patient safety and the importance of the five rights of medication administration: the right patient, drug, dose, route, and time. This process is duplicated in each of nine simulations

numerous times. The expectation is that students assimilate this process into practice as graduate nurses then as Registered Professional Nurses.

Quality and Safety Education for Nurses

Comprised of three phases between 2005-2012, Quality and Safety Education for Nurses (QSEN) is a quality improvement initiative funded by the Robert Wood Johnson foundation to address the “challenge of preparing future nurses with the knowledge, skills, and attitudes (KSAs) necessary to continuously improve the quality and safety of the healthcare systems in which they work” (QSEN, 2017).

QSEN in collaboration with the Institute of Medicine (IOM) defined six competencies which were created for use in nursing pre-licensure programs: Patient-centered care, teamwork and collaboration, evidence-based practice, quality improvement and informatics, and safety. Each of the six competencies included sets of knowledge, skills, and attitudes to be used in pre-licensure nursing programs and are interwoven throughout the simulation and debrief experiences.

QSEN in Simulation and Debrief

QSEN competencies are integral components of simulation scenarios to improve patient safety and quality improvement in a safe environment in which actual patients will not be harmed. The Institute of Medicine report, *To Err is Human: Building a Safer Health Care System*, identified simulation training as a strategy that “can be used to prevent errors in the clinical setting” (2000, p. 32). Four of six competencies; patient centered care; team work and collaboration; evidenced based care and safety have been identified as constant elements which are woven throughout each simulation. Debriefing highlights these elements as students are encouraged to reflect and analyze patient centered care and patient safety. Equally as important

is the teamwork and collaboration students experience which fosters trust and cooperation.

Competency 1: Integration of patient centered care. Students are encouraged to include the patient throughout the simulation. The patients age, cultural preferences and other factors are considered. These factors are discussed in the debrief as important criteria to effective patient care. For example, a student who repeatedly refers to an elderly patient as sweetheart may not be aware that this term may be considered disrespectful. One student identified ‘nerves’ as the rationale for calling the patient ‘sweetheart’ and recognized alternatives to infantilizing her patient.

Competency 2: Teamwork and collaboration. Effective teamwork begins with report taking in the pre-brief component of the simulation. The SBAR (Situation, Background, Assessment, Recommendation) tool as well as the pre-brief worksheet ensures students are working together to identify potential concerns, clarify roles and develop a patient plan of care. Later, during the simulation students work together to problem solve and include other members of the interdisciplinary team such as provider, laboratory, radiology or the rapid response team. During the debrief phase, students work as a team to strategize and come to a conclusion as to why or why not a procedure was successful.

Competency 3: Evidence based practice. Within each simulation current best practice is emphasized and students are urged to review best practice protocols in anticipation of a critical event. During the debrief students often require rationales for linking best practice to optimal clinical outcomes. For example, during a simulation in which a head trauma patient developed seizures one students’ priority was on administering antiepileptic medications without consideration of collaborating with another student to initiate a rapid response. Later, during the

debrief the student successfully recognized that the patient was likely experiencing an intracranial hemorrhage and required surgical intervention.

Competency 6: Safety. The overarching theme in any nursing program is that of patient safety; emphasized in all actions, behaviors and judgment. Throughout the simulation students are expected to identify gaps in patient safety to ensure risk of harm is minimized. Two patient identifiers, situational briefing model (SBAR), communication, medication reconciliation are all factors which ensure patient safety. In one scenario a patient began hemorrhaging requiring a bolus of normal saline, one student in the role of ‘primary RN’ hastily grabbed a dextrose solution which was identified as the wrong solution by the ‘secondary RN’. This action illustrated the importance of team work emphasizing patient safety. During the debrief the ‘primary RN’ reflected on the importance of staying calm during an emergency, ensuring the fluid is correct and acknowledging the importance of working together.

SECTION II: LITERATURE REVIEW

An exhaustive review of the literature regarding simulation has been carried out with several themes identified as pertinent to this project. These themes include: the importance of simulation as a useful pedagogy for students to practice in a safe environment; the debrief as integral to student learning, the necessity for standardizing the debrief component of the simulation for optimal learning and student anxiety related to feelings of inadequacy.

The Institute of Medicine (IOM) and the National Council of State Board of Nursing (NCSBN) both recognize the value of simulation in nursing education as providing an opportunity for the acquisition of clinical skills through deliberate practice. Equally as important is the debrief which is recognized as an integral component for student learning. The IOM (2005) regards simulation as a method to support nurses in the ongoing acquisition of knowledge and

skills while the NCSBN defines simulation as “an educational process where learning experiences are simulated to imitate the working environment (2016 p. 4).

Pamela Jeffries originally formulated a Simulation Framework which is now referred to as a Simulation Theory. It is important to understand Dr. Jeffries framework in order to ensure a basic foundation of knowledge regarding the importance of the simulation purpose, structure and intended outcome. Jeffries, Rodgers and Adamson (2015) describe the simulation experience as a learner-centric environment and emphasize the importance of briefing/debriefing strategies. The authors submit that in simulation, knowing how to debrief student experiences is equal in importance to knowing how to create scenarios and using the equipment to represent human physiological responses to care.

In 2016 the INACSL Standards Committee revised the Standards of Best Practice: SimulationSM. This document communicates best practices on how to design, conduct, and evaluate simulation activities. The article discusses the need for standards of best practice and describes the evolution of how the current standards came to be. The standards with descriptors are as follows:

Standard I: Simulation Design. Simulation-based experiences are purposefully designed to meet identified objectives and optimize achievement of expected outcomes.

Standard II: Outcomes and Objectives. All simulation-based experiences begin with the development of measurable objectives designed to achieve expected outcomes.

Standard III: Facilitation. Facilitation methods vary and are dependent upon the needs of the participant and intended outcomes. The facilitator must take responsibility for managing the simulation experience.

Standard IV: Debriefing. This standard emphasizes the importance of planning a debriefing session aimed at improving future performance.

Standard V: Participant Evaluation. Emphasize is placed on the importance that all participants must be evaluated.

Standard VI: Professional Integrity. Professional and ethical behaviors are expected by all who participate in the simulation experience.

Standard VII: Simulation-Enhanced Interprofessional Education (Sim-IPE).

Interprofessional collaboration is encouraged to work together for a common goal.

Standard VIII: Simulation Glossary. Consistent language and similar communication are the goals for the simulation glossary. (INACSL, 2016).

This document was integral to this Doctoral in Nursing Practice (DNP) initiative as it supported the supposition that simulation learning experiences must be based on best practice for the most optimal learning to occur. In further review of the literature, INACSL is very clear regarding the fact that all simulation-based learning experiences should include a planned debriefing session aimed at promoting reflective thinking (2016). The guide emphasizes that facilitator skills are important to ensure the best possible guided learning. Without guidance facilitators may inadvertently lead the learner to negatively transfer a mistake into their practice without realizing it. (Decker, et al, 2013).

While there appears to be a paucity of literature regarding the debrief in the simulation learning experience, what is available speaks to the importance of the debrief within the framework of the simulation learning experience. Support for the debrief as crucial to the simulation learning experience is evidenced by a sentinel document written by members of the NLN in collaboration with members of INACSL. *Debriefing Across the Curriculum a Living*

Document (2015) supports the notion that integrating debriefing across the curriculum (not just in simulation) has the potential to transform nursing education. The conclusion is that the self-reflection that occurs during the debriefing conversation and the feedback given during this time are essential for learners to be “meaning-makers”. This document is very important to nursing education as it signifies the validity of the debrief as the transformational component of the simulation. Furthermore, reflection, is identified to be at the core of debriefing itself further cementing the concept of student centered learning.

Numerous articles emphasized the importance of trained facilitators resulting in decreased student stress and improved student learning. Hayden, Smiley, Alexander, Kardong-Edgren. & Jeffries. (2014) emphasized simulation requires the learner to demonstrate the procedural techniques, decision-making, and critical thinking needed to provide safe and competent patient care. However, student anxiety levels stemming from a lack of experience have been found to decrease student learning. Fanning and Gaba, (2007) collected data from surveys of participants which indicated perceived skills of the debriefer have the highest independent correlation to the perceived overall quality of the simulation experience.” (p.118). They emphasized an ethical obligation for the facilitator in simulation-based learning to “determine the parameters within which behavior will be analyzed, thereby attempting to protect participants from experiences that might seriously damage their sense of self-worth. In order for this to occur the facilitator must be trained in [the ‘knowing’ of] how to debrief students.” (p. 2).

In a 2012 meta-analysis study Tannenbaum & Cerasoli reported that the quality of debriefing was positively correlated with improved learning outcomes. (2012). In a later mixed method study using the Lasater Clinical Judgment Rubric Mariani, Cantrell, Meakim, Prieto & Dreifuerst, K (2013) examined the effects of structured debriefing on 86 junior-level nursing

students' clinical judgment. Qualitative findings did indicate that students perceived more benefit in their overall learning and integration of clinical knowledge and skills using a structured tool to debrief versus unstructured debriefing sessions emphasizing structured debriefing as a critical component of the simulation experience.

The crucial element of the debrief in the simulation learning experience was highlighted when Rudolph et. al (2006) discussed the importance of debriefing as a formative assessment and reinforced the differences between facilitation in a non-judgmental manner versus facilitation with good judgment. The notion of debriefing with good judgment is illustrated by providing a comparison of three approaches to debriefing including judgmental, non-judgmental and debriefing with good judgment. The debriefing with good judgment model became the framework in which this DNP project began.

In conclusion, the literature provides evidence that "simulation is a pedagogy which is an integral component of the pre-licensure curriculum, provided that faculty are adequately trained and when debriefing is based on a theoretical model" (NCSBN, 2016 p. 4). The literature further supports the notion that learning occurs in a non-punitive, non-judgmental caring environment in which learners are made to feel psychologically safe enough to reflect on thoughts actions and behaviors. Lastly, literature emphasizes that effective debriefing in simulation is an important key to long-term improvements in patient safety and care.

SECTION III: THEORETICAL FRAMEWORK

Dr. Jean Watson's Caring Theory and Kolb's Experiential Learning Theory (ELT) are two theories that have guided this DNP initiative. These theoretical frameworks have formed the foundation and principals by which the simulation learning experiences at one school of nursing are transformed. Watson's theoretical framework, focuses on interpersonal and transpersonal processes in human care, and presents an effective model in understanding the concept of caring. David Kolb recognized that learning is a process unique to each individual style of learning and that experiential learning is crucial in preparing nursing students for safe patient care.

Dr. Jean Watson's descriptive Theory of Human Caring was released in 1979 and most recently revised in 2012 is one of the newest grand theories in nursing today. Watson emphasizes humanistic aspects of nursing as they intertwine with scientific knowledge and nursing practice. Watson (2006) discloses that caring is the central characteristic of nursing, a transpersonal caring relationship based on the conscious connection between the one caring for [educator] and the one cared for [student], while maintaining the dignity and uniqueness of each person's teaching-learning experience. Watson (in Hill, 2011) identifies that "authentic power is shared power; it is power with, not power over" (p. 17).

Dyess, Boykin & Rigg (2010) emphasize that nursing theoretical frameworks have been known to influence patient outcomes; those grounded in a caring science have been supported through research to be responsible for improved patient care. A caring philosophy was the foundation for the project with the overarching goal of improved patient care and safety. As a first step in actualizing the project, caring concepts were integrated throughout the nursing department. A presentation on caring in nursing education was offered to the faculty. Students were encouraged to honor caring behaviors of others by placing a statement of that behavior on a

‘caring’ bulletin board located in a prominent hallway. Importantly, changes to the simulation debrief were initiated with several students immediately reporting feeling less stressed. One student stated she “felt safe during the debrief”, another exclaiming “I felt like we were all on the same page, I didn’t know everything, but that was okay. This highlighting two of Watsons caritas processes; “practicing loving-kindness and equanimity within context of caring consciousness and being authentically present” (Watson, 2008, p. 34).

Experiential Learning Theory (ELT) draws on the work of prominent 20th century scholars who gave experience a central role in their theories of human learning and development. Scholars such as Dewey, Lewin, Piaget, and others developed a holistic model of the experiential learning process and multilinear model of adult development (Kolb & Wolfe, 1981). The theory is built on six propositions that are shared by these scholars. Proposition one resonates as it relates to the simulation experience. This proposition highlights learning as best conceived as a process, not in terms of outcomes. To improve learning in higher education, the primary focus should be on engaging students in a process that includes feedback on the effectiveness of their learning effort (Kolb & Kolb, 2005). Additionally, learning and knowledge are created through the transformation of experience. Knowledge results from the combination of grasping and transforming experience (Kolb, 1984). Pre-licensure inter-professional education has been suggested as a strategy for improving communication and collaboration among health profession students. Kolb’s Experiential Learning Theory can be used to guide simulation-based interprofessional education, offering both a foundation and process for knowledge acquisition based on the needs of each individual learner (Poore, Cullen, & Schaar, 2014).

Kolb’s learning cycle, directly relates to the simulation and debrief experience. The cycle consists of four phases that include concrete experience where the learner participates in an

experience such as a simulation; reflective observation where the learner reflects on the experience; abstract conceptualization where the learner reflects to identify the significance of the learning experience and considers what may have been done differently. The fourth phase is related to active experimentation which involves using what was learned to direct future practice (Kolb, 1984).

SECTION IV: METHODOLOGY

Pre-Implementation: Spring 2016

The original aim of this DNP initiative was to standardize the simulation process at one school of nursing. After significant literature review of best practices in simulation one theme emerged: the importance of the debrief as vital to student learning and transfer of knowledge. Additional findings in the literature specific to debriefing validated these themes supporting the need to transform the debrief component of the simulation utilizing best practice concepts.

Support for the initiative to standardize the debriefing process of the simulation experience was secured from the Department Chair as well as the faculty at large followed by project approval from the director of the DNP program at Seton Hall University. A project mentor was identified as appropriate secondary to her background as simulation coordinator, nurse educator and Jean Watson Post-Doctoral Scholar. Following approval from stakeholder's A national INACSL conference was attended supporting an effort to become the department expert in simulation and debriefing. Attendance at a Center for Medical Simulation (CMS) seminar impacted the project significantly as the model of "debriefing with good judgment" was introduced. It was this model which became the foundation for how debriefing would improve. Additional webinars and seminars provided information of current trends and best practice in simulation pedagogy and emphasized the importance of the debrief for student learning.

Student Input

In order to understand what students', felt about simulation informal discussions were conducted as well as review of the results of the fall 2015 simulation evaluations. Several students identified experiencing 'dread' or 'humiliation' during simulation. Some students were unable to identify the purpose of the debrief. Comments such as "that is where we go over what we did right or wrong" were common. A student wished the experience was not so 'nerve-wracking.' One student identified simulations as "...like taking a test without a grade but possibly having to go to the lab as a punishment." However, this same student stated she really would love simulations if she was not so worried about "failing."

Fall semester 2015 simulation evaluation scores by course averaged 4.68 out of five possible points. A closer examination identified the majority of comments focused on personality characteristics of the simulation educator versus actual benefits gleaned from the simulation experience. It was evident that students did not perceive the actual benefit of the simulation experience as it was designed thereby reinforcing the need for transformation.

Table 1
Pre-Implementation student evaluation summary

[illegible]

Summary: The majority of the comments in the pre-implementation evaluation are personality traits such as funny, calm, patient, helpful. Very few comments (illustrated in bold) are related to actual simulation/debriefing process.

Initial Implementation

Faculty were provided information regarding the good judgment model as well as being mindful of body language: rolling of one's eyes, deep sighs, crossing ones' arms, et. cetera. These behaviors do not welcome openness and do not demonstrate caring thus are not behaviors that students would trust. Watson (n.d.) emphasizes the nurse's ability to connect with another at this transpersonal spirit- to- spirit level is translated via movements, gestures, facial expressions ... and human means of communication. Faculty were also asked to accept the premise that the concept of "debriefing with good judgment" is meant to increase student awareness of identifying mistakes individually or as a team, reflecting on those mistakes and coming to a conclusion to the most correct response with gentle guidance versus faculty instruction.

Students were also informed of the impending changes. Not surprisingly senior level students reported the most satisfaction with the implementation of change as they were most familiar with the former simulation and debrief model. Comments such as "simulation is always so stressful" or "I hated the way I felt after I left the simulation". One student seemed to sum-up the overall consensus when she opined "I know I'm not stupid but man did I feel stupid".

Introducing the "Debriefing with Good Judgment" Model and Other Tools

Existing debriefing literature provides little guidance on how to create an environment in which students feel simultaneously challenged and psychologically safe enough to engage in rigorous reflection. Rudolph (2006) identifies

"The good judgment approach is one that values the expert opinion of the instructors, while at the same time valuing the unique perspective of the student. The idea is to learn what participant frames [of mind] drive their behaviors so that both their "failures" and successes can be

understood as a logical solution to the problem as perceived within their frames.” (p.365-366).

Educators may debrief with judgment that is pointing out an error of one of the participants requesting another student ‘fix’ or correct the error. This method is often deemed humiliating and may discourage reflection. Educators erroneously think that mollification of critique facilitates learning; however, this process inhibits not promotes learning. A sandwich approach is another non-judgmental technique depicted by complimenting some of the behavior while critiquing other behaviors. Other methods of non-judgmental approach may include providing part of an answer or by raising ones’ voice when suggesting a response. While these methods can seem effective in saving the student embarrassment it does not provide an opportunity for students to reflect and come to clinical judgment conclusions themselves. Additionally, while well-meaning this method may be viewed by the student as condescending and or confusing. The good judgment approach is one that values the expert opinion of the faculty, while at the same time valuing the unique perspective of the student (Rudolph et. al., 2006). In order for faculty to transition to the good judgment approach the concept of advocacy-inquiry was introduced.

Advocacy-Inquiry

In order for several faculty members to fully grasp the concept of a good judgment model three examples of debriefing were provided. Judgmental, non-judgmental and good judgment using advocacy-inquiry. An instructor might say, *Kerri, why didn’t you provide oxygen to the patient? There was a prn order.* The faculty were asked their opinions regarding this judgmental method. Responses included such comments as the “student would have been embarrassed”; “the student might not want to fully participate” or “the student may feel like a failure”.

Then the faculty were asked to compare the judgmental method to the non-judgmental method: *Kerri, what was this patient's saturation level when you elevated the patients head?*

One faculty opined, "We'll this was a nicer way to put it but did Kerry understand where the instructor was going?" Finally, the third method was presented.

Kerri I noticed you put the patients head up when she reported difficulty breathing then checked vital signs; I was thinking there may have been another intervention that would have assisted the patient at that point (advocacy). So I'm curious: how were you seeing the situation at that time? (inquiry). Faculty began to see the benefit of reflection as it related to critical thinking, this is where the buy in was successful. To ensure consistency in the facilitated debrief an advocacy inquiry tool based on the article by Rudolph et al (2006) was provided as a guide.

Implementation and Post Implementation

Evaluating faculty

Faculty were expected to observe at least one simulation. For example, a faculty member teaching concepts in neurology would observe facilitation of a debrief of a pediatric patient with an acquired brain injury (ABI) resulting in increased intracranial pressure (ICP) with subsequent seizure activity. That faculty member would then be observed during facilitation of the same scenario with a different group of students. Each simulation debrief was conducted in this manner until all nine simulations were observed and the faculty members verbalized comfort with the process. The DASH© tool was used as a guideline for faculty to self-assess knowledge and ensure consistency with all who facilitated the debriefing process. The DASH© tool is designed to assist in evaluating and developing debriefing skills and evaluates the strategies and techniques used to conduct debriefings by examining concrete behaviors. It is based on evidence

and theory about how people learn and change in experiential contexts (Simon, Raemer & Rudolph, 2010).

Evaluating Students

Simulation instruction has become more than exposing students to a scenario. The need for valid and reliable instruments to evaluate student's needs to be considered as simulation is embedded into the nursing curriculum (Kelly, 2014). The Accreditation Commission for Education in Nursing (ACEN) is the certifying body for Associate Degree Level Nursing Programs. ACEN requires appropriate evaluation methods to ensure student learning outcomes (SLO) are met. Standard IV criterion 4.2 states "curriculum supports the achievements of SLO's which are used to organize the curriculum, guide instruction delivery, direct learning activities, and evaluate student progress across the curriculum." (ACEN, 2017 pg. 4).

Several tools are available in which to assess students in simulation. The Creighton Simulation Evaluation Instrument (C-SEI™) has been modified for use at this school of nursing and is the method used to evaluate students during simulation (Appendix F). The NLN is currently conducting a study using the Creighton Simulation Evaluation Instrument (C-SEI™) to evaluate students in clinical simulation. Prior to implementation a version of the Creighton instrument was used to evaluate students with a pass-fail component. Students viewed this tool as high stakes as it was associated with potentially a major consequence...or "as the basis for a major grading decision, including pass-fail implications" (Bensfield, Olech, & Horsley, 2012, p. 71).

Evaluating students in what is considered a high-stress; anxiety-ridden environment has been met with some controversy. Often, students evaluated in this manner were not provided the opportunity for self-correction or if they were, it was not formally noted on the evaluation tool.

For example, prior to project implementation, the evaluation tool was constructed in such a way that if a student had difficulty meeting a competency the facilitator was often compelled to mark the competency as ‘not met’ versus encouraging the student to reflect on actions and behaviors with an opportunity to self-identify a different action or behavior. Literature was reviewed with a focus on what the leaders in simulation viewed as the best evaluative tool. Suzie Kardong-Edgren and others, suggest those who facilitate simulation would be wise to adopt and or refine currently published evaluation tools (2010). In a personal correspondence Kardong-Edgren (2011) opines:

“I would hope that those who ‘grade’ have been formally educated in some standardized fashion in debriefing and simulation education and that there has been norming for inter-rater reliability. Or that one faculty member grades EVERYONE, so they see the full gamut of behaviors exhibited in a scenario.”

Importantly, the NLN (2015) does not recommend pass/fail scoring on simulation prior to graduation suggesting potential negative effects for students. Additionally, in its 2012 document *Fair testing imperative in nursing education* the NLN is unequivocal when it reports that “evaluative measures must be used not only to assess student achievement but to support student learning and evaluate and improve teaching and program effectiveness.” (p. 2).

Modifying an Existing Tool

In May 2017, consideration was given to choosing a different evaluative tool. Numerous tools were reviewed however most tools did not report inter-rater reliability and or validity factors, nor did any (tool) stand out. Therefore, after consideration of all of the factors related to the purpose of an evaluation tool, it became clear that modification of the previous simulation tool would be appropriate. The faculty-at-large voted to accept the changes to the simulation

evaluation tool as a trial commencing in the Fall 2017, any structural changes to the tool would be voted on by the faculty-at-large prior to the start of Spring 2018 semester.

By integrating a good judgment model as well as the concept of advocacy-inquiry faculty leading simulations reported observing students taking time to reflect on actions, thoughts and behaviors during the simulation. This reflection allowed students the opportunity to revise a decision or action, coming to a conclusion as to why he/she acted in a certain manner. Importantly, students were encouraged to reflect and collaborate with other students and focus less on input from faculty. With this in mind and with the approval of the department chair a redesign of the current tool was implemented and is set to trial fall 2017 (Appendix G).

SECTION V: PROJECT OUTCOMES

The implementation of the project began in the Fall of 2016 and concluded in the Spring of 2017. 125 undergraduate nursing students and seven faculty members participated in this quality initiative which has been identified as a significant improvement in the way simulations and debriefing is conducted. Faculty and students all verbalized appreciation of the efforts and change. Many students specifically appreciated the advocacy-inquiry method of working through areas of difficulty. One particular student reflected “I can see an algorithm forming in my head; thank you so much for allowing me to work this through without pressure!” Another student exclaimed “I actually love coming to these simulations, I know I will learn something important!”

Student Evaluation Outcomes

A comparison of the pre-implementation simulation evaluations with end of project evaluations revealed a glaring contrast. Pre-implementation evaluations showed the vast number of students commented on the character traits of the facilitator. These comments did not reflect

Student evaluations of Spring 2017 revealed the following information. Likert scores averaged 4.9 out of five possible points, with a significant increase in comments related to knowledge acquisition and reflection. Many students identified the terms ‘debrief’ and as well as several comments related to ‘non-judgmental’ experiences. Students acknowledge the improvement of the overall process of how simulations are facilitated and appreciated the emphasize on team work-collaboration and coming to a conclusion during the debrief.

Implementation Phase: Student evaluation summary

Course	# of students	Likert scale 1-5	#of comments	Sample Comments	(+) (-)
--------	---------------	------------------	--------------	-----------------	---------

[illegible]

				We can fix it if we get it wrong	
<p>Course 104 Principal of Nurse caring III</p> <p>2 simulations:</p> <p>1): Endocrinology Hypoglycemia</p> <p>2): Neurology-Increasing intracranial pressure secondary to fall from a tree. (pediatric)</p> <p>(continued)</p> <p>Course 104 Principal of Nurse caring III</p>	40	4.9/5	32	<p>Calm/patient/helpful/kind Passion/lets students think Knowledge of the material Comfortable learning environment I like her hints for nursing skills Wants students to succeed. Cares/high energy Accepting of mistakes/awesome takeaways/ does not pass judgement/ good balance of formal and informal learning Explains without passing judgement Explains concepts I like... ‘Pearls of Wisdom’ Makes you feel proud you learned something that day Love the take away’s. I leave sims feeling better prepared I gained A lot of information during the reflection part of the sim. Encourages open discussion after the sim. ...a reflection period which helps reinforce what is right or wrong. This is valuable. We use our mistakes as learning experiences ... guides us to find the answer ourselves and allows us to learn.</p> <p>She tends to be a bit unorganized The instructors need to communicate between them selves</p>	+24
<p>Course 200- Principal of Nurse Caring IV</p> <p>2 simulations:</p> <p>1) Cardiology-Atrial Fibrillation</p> <p>2) Respiratory-COPD with pneumonia</p>	19	5/5	16	<p>I don’t feel ashamed when I don’t know the info. ...creates a no judgement zone in sims Aware of students stumbling blocks and works to help overcome them ...brings us to the next level ...Reminds US it’s a learning experience Love that The take away!</p>	+16
<p>Course 201-Behavioral Health</p> <p>1 simulation: Dual diagnosis of alcohol and opioid addiction admitted for acute pancreatitis</p>	17	4.9/5	17	<p>...comforting when you are stressed Helpful/enjoyable/Great at explaining Teach other courses Relatable in difficult situations</p>	+16

				I like the debriefing process Has a reflecting point at the end of the simulation; which is outstanding. It is a wonderful learning experience-no one ‘does poorly’ Real world experiences; fun yet learning occurs. ...Encourages us to learn in simulations ...makes sure we each take away something from the sim at the debrief. Application to real life occurs Encourages growth from mistakes I feel easily ignored because I am shy and last sim she did not have an answer to a pre-sim question	-1
Summary: The majority of the comments in this Spring 2017 evaluation are focused on the students' experience in the debrief. This demonstrates an increase in student awareness of the importance of the process as well as student satisfaction supporting student perception of learning and caring.					

A consensus of the seven participating faculty members involved in this initiative revealed overall satisfaction related to the simulation and debrief transformation. Comments such as “I love it!” and “The new tools are helpful” and “I see a difference in how students are taking this more seriously but are not as stressed.”

Pre-brief Expectations and Student Accountability

Transformation of the debrief component resulted in a cascade of changes. It was obvious that one aspect of the simulation process could not be strengthened without some modification to the additional components; this included the pre-brief. During initial student interviews, high variability was noted in faculty members' expectations for student pre-brief preparedness. To mitigate confusion on the part of students and to standardize the simulation process a representative of a well-known simulation learning systems company provided an in-service to demonstrate numerous online tools which the faculty could access to better prepare students prior to any simulation. To ensure conformity between the courses a pre-brief tool was

successfully implemented (Appendix G) and a policy was created regarding pre-brief expectations.

This tool proved to be quite effective in ensuring that students arrived to the simulation prepared with information about the patient which was now accessible in the online student learning system. Information included the basics such as admission information, previous medical history, demographics, and medications taken at home. Based on this information the students were expected to research the initial diagnosis, review medications, take demographics into consideration and outline patient plans of care on the pre-brief worksheet.

Completion of this worksheet was considered the entrance ticket to the simulation. Students not completing the worksheet without a valid excuse could be asked to leave and return prepared another time. This spoke to accountability and was regarded well by the students and faculty alike. After ensuring the student had indeed successfully prepared, the simulation started. Four students receive a patient report by the outgoing nurse (faculty member) each of the four collaborate and share their individual pre-brief worksheet conclusions. Then as a group they would complete another pre-brief worksheet hopefully coming to a consensus as to what would be required to successfully manage their patient/assignment.

Remediation

Despite eliminating the implication of high stakes during the simulation there may on occasion be a need to remediate. Within the body of the student handbook under the simulation category were seven student behaviors and actions which already spoke to student accountability. These guidelines were integrated into a document (Appendix H) which rather than speaking to failure emphasized actions or behaviors expected of the student during the simulation process. If a student arrived to the simulation ill prepared faculty had the option of

instructing the student to return to the lab or if necessary, repeat a simulation. These options were to be considered if the student behaviors were inconsistent with self or group learning or if the student demonstrated behaviors not consistent with caring respectful attitudes. The seven attitudes or behaviors include:

1. Report to the simulation on time.
2. Come prepared. This includes completion of all pre-assignments and the ability to demonstrate beginner RN competencies.
3. Wear their student nurse uniform and identification badge and comply with the dress code policy as described in the student handbook.
4. Exhibit professional behavior at all times. This includes interactions with the simulated patient and other participants.
5. Exhibit professional behavior at all times including speak to the mannequin as if he/she were a real person at all times.
6. Actively participate in their assigned role.
7. Successfully meet the Universal Competencies and or SLO's for the simulation.

SECTION VI: SUMMARY AND RECOMMENDATIONS

The purpose of this initiative was to transform the outdated debrief methods and introduce debrief tools, concepts and best practices to the simulation experience. In general, short-term outcomes have been actualized and include improved student self-confidence and reflection resulting in enhanced critical judgment. Ongoing costs specific to this initiative are expected to be nominal and should be limited to printing materials.

Sustainability

This DNP initiative which began in the Fall of 2016 was well received and supported by the department chair, the nursing faculty and the students at large. Due to overwhelming success of the initiative it was adopted as a policy in Spring 2017. Currently, a Simulation Policy and

Procedure Manual is being developed with collaboration of the simulation committee. It is expected that revisions to policies and tools will be necessary over time as new best practices and simulation and debriefing strategies evolve.

Ongoing training and evaluation. As faculty retire, it will become necessary to train new faculty in the best practices of simulation and debriefing. The process of evaluation will remain as previously discussed; the simulation coordinator will facilitate a simulation, followed by the new faculty member facilitating with the coordinator as observer. The method of advocacy inquiry will be demonstrated and the faculty member will self-evaluate using the DASH© tool with additional support provided if needed.

Future initiatives

A limitation of this project was that while it is hoped that students will carry over knowledge after the debrief it is not certain. One future initiative supported by the simulation committee is that of integrating questions specific to the simulation into a theory exam. For example, if students in a simulation reflected on prioritization for a patient hemorrhaging, a question related to that discussion would be included in the course exam. This may demonstrate whether actual knowledge acquisition has occurred and will require additional research on this topic.

A second future initiative would identify if new graduates correlated long term knowledge acquisition related to patient safety and optimized outcomes of care with debrief experiences resulting in improved patient safety and optimized outcomes of care. A new graduate survey would be disseminated three months after graduation with the intent to identify perceptions of knowledge acquisition gleaned in simulations. Additional research on this topic will be necessary to determine if it is possible to correlate long term knowledge acquisition to patient safety and or

optimized outcomes of care.

Future Direction

With the rapid evolution in simulation technology and the recognition of the importance of debriefing to simulation learning, a 2400 square foot simulation center is expected to open in the Fall of 2018. Specific to debriefing are five debrief rooms one for each of the five simulation areas. The debrief rooms include a white board and a round table with five chairs, the premise being all participants are of equal importance.

This new facility is part of an N-STEM (nursing, science, technology engineering and math) initiative and is funded by state and local stakeholders as well as generous support from individual donors. The center addresses a communitywide need for a simulation center and speaks to the Institute of Medicines call for interdisciplinary collaboration. The center will be available for use by local hospitals and provider practices during off hours and summer vacation.

Simulation Exemplar

Senior students would be expected to identify respiratory distress in a patient with an exacerbation of chronic obstructive pulmonary disease secondary to pneumonia. Vital signs and symptoms such as hyperventilation, tachycardia, adventitious lung sounds and decreased oxygen saturation would reflect clinical deterioration. The participating students would be expected to immediately intervene, elevate the head of bed, administer oxygen via non-rebreather mask, contact the respiratory therapist for administration of prn albuterol or ipratropium bromide and most importantly if still in decline call a rapid response.

Conversely, if the patient stabilized students were expected to contact the provider to discuss possible transfer to higher level care. If the students did not identify the patients distress the simulation would be suspended. During the suspended simulation a huddle would occur in

which all student participants would brainstorm. Reflection would occur and the facilitator would ask thoughtful questions (advocacy/inquiry). Once all participants agreed on a plan the simulation would resume.

This method allowed students to correct errors immediately and continue with the simulation as not to feel like a failure. This is supported by Benner, Sutphen, Leonard, and Day (2010) who note that “reflection on practice helps the student develop a self-improving practice.” (p. 26). Following the simulation, using the concept of advocacy-inquiry the debrief would occur with the facilitator encouraging reflection. Ultimately, the expectation would be for students to leave the experience with a higher level of knowledge solidified by hands on experience. Debriefing using reflection takes students beyond critical thinking toward higher clinical reasoning skills and understanding of how the experience informs the next clinical situation encountered (Lasater, 2007).

SECTION VII: CONCLUSION

This DNP initiative proved to be quite successful and has been fully adopted by nursing faculty at this school of nursing in New York State. The foundation of this initiative is that of Jean Watson's Theory of Human Caring (2011) which identifies that authentic power is shared power; it is “power with, not power over”. The idea of shared power sparked the idea to transform the simulation experience to one of caring and reflection. Integrating a good judgment model, supporting faculty with effective debriefing tools and using the advocacy-inquiry format have all contributed to a successful transformation of the simulation debrief experience.

References

- Accreditation Commission for Education in Nursing. (2013). Accreditation Manual
retrieved online from <http://www.acenursing.org/accreditation-manual/>
- Babenko-Mould, Y., Andrusyszyn, M. A., & Goldenberg, D. (2004) Effects of computer-based conferencing on nursing students' self-efficacy. *Journal of Nursing Education*, 43(4), 149-155.
- Benner, P., Sutphen, M., Leonard, V. and Day, R. (2010). *Educating nurses: A call to radical transformation*. A Wiley Imprint, San Francisco.
- Bensfield, L., Olech, M. & Horsley, T. L. (2012) Simulation for high-stakes evaluation in nursing. *Nurse Educator*, 37(2), 71-74.
- Bray, J., & Howkins, E. (2006). Facilitating interprofessional learning in the workplace: A research project using the Delphi technique. *Work Based Learning in Primary Care*, 4(3), 223-235.
- Burns, C. L. (2015). Using debriefing and feedback in simulation to improve participant performance: an educator's perspective. *International Journal of Medical Education*, 6, 118–120. doi.org/10.5116/ijme.55fb.3d3a
- Cantrell, M. A. (2008). The importance of debriefing in clinical simulations. *Clinical Simulation in Nursing*, 4(2) 19-23. Retrieved online from
[http://www.nursingsimulation.org/article/S1876-1399\(08\)00007-8/pdf](http://www.nursingsimulation.org/article/S1876-1399(08)00007-8/pdf)
- Decker, S., Fey, M., Sideras, S., Caballero, S., Rockstraw, L., Boese, T., ... Borum, J. (2013). Standards of best practice: Simulation standard VI: The debriefing process. *Clinical Simulation in Nursing*, 9(6), S27-S29. doi.org/ 10.1016/j.ecns.2013.04.008.
- Decker, S., Sportsman, S., Puetz, L., & Billings, L. (2008). The evolution of simulation and

- its contribution to competency. *Journal of Continuing Education in Nursing*, 39(2), 74-80.
- Dreifuerst, K. (2012). Using debriefing for meaningful learning to foster development of clinical reasoning in simulation, *Journal of Nursing Education*, 51, 326-333.
- Dreifuerst, K. (2009). The essentials of debriefing in simulation learning: A concept analysis. *Nursing Education Perspectives*, 30(2), 109-14.
- Durham C. & Alden, K. Enhancing patient safety in nursing education through patient Simulation (2008). In: Hughes R (ed). *Patient Safety and Quality: An Evidence-Based Handbook for Nurses*. Rockville, MD: Agency for Healthcare Research and Quality. Retrieved online from <https://www.ncbi.nlm.nih.gov/books/NBK2628/>
- Dyess, S., Boykin, A., Rigg, C. (2010). Integrating caring theory with nursing practice and education connecting with what matters. *Journal of Nursing Administration* 40, (11), 498-503. doi. 10.1097/NNA.0b013e3181f88b96.
- Faculty of Pharmacy and Pharmaceutical Sciences, University of Alberta. (2007). *Debriefing using the Advocacy-Inquiry method*. Retrieved online from <http://www.hserc.ualberta.ca/TeachingandLearning/VIPER/EducatorResources/AdvocacyInquiry.aspx>
- Fanning R. & Gaba D. (2007). The role of debriefing in simulation-based learning. *Simulation in Healthcare*, 2(2), 115-125. Retrieved online from <http://multibriefs.com/briefs/aspeorg/Debriefing2.pdf>
- Fey, M. (2014). Debriefing Practices in Nursing Education Programs in the United States. (Doctoral Dissertation). Retrieved from https://archive.hshsl.umaryland.edu/bitstream/10713/4051/1/Fey_umaryland_0373D_10540.pdf
- Halstead, J. (2012). *NLN fair testing guidelines for nursing education* [Press Release]. Retrieved

from <http://www.nln.org/docs/default-source/default-document-library/fairtestingguidelines.pdf?sfvrsn=2>

Harjai, P. K., & Tiwari, R. (2009). Model of critical diagnostic reasoning: Achieving expert clinician performance. *Nursing Education Perspectives*, 30(5), 305–311.

Hayden, J.K., Smiley, R.A., Alexander, M., Kardong-Edgren, S. & Jeffries, P.R. (2014). The NCSBN national simulation study: A longitudinal, randomized controlled study replacing clinical hours with simulation in pre-licensure nursing education. *Journal of Nursing Regulation*, (2) Suppl., S1-S64. Retrieved from https://www.ncsbn.org/JNR_Simulation_Supplement.pdf

Hills, M. (2011). *A caring science curriculum: An emancipatory pedagogy for Nursing*. J. Watson (Ed.). New York, NY: Springer Publishing.

INACSL Standards Committee. (2016). INACSL standards of best practice: Simulation Debriefing. *Clinical Simulation in Nursing*, 12(S), S21-S25
doi.org/10.1016/j.ecns.2016.09.008

INACSL Standards Committee (2016). INACSL standards of best practice: Simulation. Simulation design. *Clinical Simulation in Nursing*, 12(S), S5-S12.
doi.org/10.1016/j.ecns.2016.09.005

INACSL Standards Committee (2016). INACSL Standards of Best Practice: SimulationSM Outcomes and objectives. *Clinical Simulation in Nursing*, 12(S), S13-S15. doi.org/10.1016/j.ecns.2016.09.006.

INACSL Standards Committee (2016). INACSL standards of best practice: Simulation Facilitation. *Clinical Simulation in Nursing*, 12(S), S16-S20.
doi.org/10.1016/j.ecns.2016.09.007.

- Jeffries, P., Rodgers, B., Adamson, K. (2013). NLN Jeffries simulation theory: Brief narrative description. *Nursing Education Perspectives*, 36, 292-293.
- Jeffries, P. R. (Ed). (2012). *Simulation in nursing education: From conceptualization to evaluation* (2nd ed.). New York, NY: National League for Nursing.
- Jeffries, P. (2010). *The art of debriefing: How to conduct a guided reflection and its importance*. (Presentation). Presented at the National League of Nursing Conference, Las Vegas, Nevada.
- Jeffries, P. A. (2005). Framework for designing, implementing, and evaluating simulations used as teaching strategies in nursing. *Nursing Education Perspectives*, 26(2), 96-103.
- Johnson-Russell, J., & Bailey, C. (2010). Facilitated debriefing. In Nehring, W. M., and Lashley, F. R. (Eds.). *High-fidelity patient simulation in nursing education*. Boston: Jones and Bartlett. 369-385.
- Kardong-Edgren, S., Adamson, K. A., & Fitzgerald, C. (2010). A review of currently published evaluation instruments for human patient simulation. *Clinical Simulation in Nursing*, (6), e25-e35. doi: 10.1016/j.ecns.2009.08.004.
- Kelly, S. (2014). *Evaluation methods used in simulation: A survey of faculty and student perceptions in an undergraduate nursing program*. (Doctoral Dissertation). Retrieved online from http://d-scholarship.pitt.edu/23513/1/ETD_Kelly_Susan_12-10-14_Revisions.pdf
- Kolb, A. & Kolb, D. (2005). Styles and learning spaces: Enhancing experiential learning in higher education. *Academy of Management Learning & Education*, 4,2, 193-212. Retrieved from

<https://www.jstor.org/stable/pdf/40214287.pdf?refreqid=excelsior:1e0286df9f57ca6a11ab5d1b8a9c4b5e>

Kolb, D. (1984). *Experiential learning: Experience as the source of learning and development*. Englewood Cliffs, NJ: Prentice-Hall.

Kolb, D. & Wolfe, D. (1981). Professional education and career development: A cross-sectional study of adaptive competencies in experiential learning (Research Project).

Retrieved from <http://files.eric.ed.gov/fulltext/ED209493.pdf>

Lasater, K. (2007). High-fidelity simulation and the development of clinical judgment: Students experiences. *Journal of Nursing Education*, (6), 269–276.

Lopreiato, J. O. (Ed.), Downing, D., Gammon, W., Lioce, L., Sittner, B., Slot, V., Spain, A. E. (Associate Eds.), and the Terminology & Concepts Working Group. (2016). *Healthcare Simulation Dictionary*. Retrieved from <http://www.ssih.org/dictionary>

Maestre, J., Rudolph, J. (2015). Theories and styles of debriefing: The good judgment method as a tool for formative assessment in healthcare. *Revista Española de Cardiología* Vol. 68, 282-285. Retrieved online from <http://www.revespcardiol.org/en/theories-and-styles-of-debriefing/articulo/90398661/>

Mariani, B., Cantrell, MA., Meakim, C., Prieto, P., Dreifuerst, K. (2013). Structured debriefing and students' clinical judgment abilities in simulation. *Clinical Simulation in Nursing*, 9, 147-155.

National Council of State Boards of Nursing. 2016. *NCSBN Simulation Guidelines for Pre-Licensure Nursing Education Programs*. Retrieved online from https://www.ncsbn.org/16_Simulation_Guidelines.pdf

National League of Nurses (2015). *Debriefing across the curriculum a living document from the*

Health Care in America, Institute of Medicine. Washington, DC: National Academy Press.

Rudolph, J. W., Simon, R., Rivard, P., Dufresne, R. L., & Raemer, D. B. (2007). Debriefing with good judgment: Combining rigorous feedback with genuine inquiry. *Anesthesiology Clinics*, 25(2), 361–3. Retrieved from http://www.med.wisc.edu/files/smph/docs/clinical_simulation_program/debriefing.pdf

Rudolph, J., Simon, R., Dufresne, R., Raemer, D. (2006). There's no such thing as nonjudgmental debriefing: A theory and method for debriefing with good judgment. *Simulation in Healthcare*, 1 (1). Retrieved from <http://www.oclbcp.org/Documents/Simulation%20articles/Debriefing%20with%20good%20judgment.pdf>

Schön, D. A. (1983). *The reflective practitioner: How professionals think in action*. New York, NY: Basic Books.

Shinnick, M. A., Woo, M., Horwich, T. B., & Steadman, R. (2011). Debriefing: The most important component in simulation? *Clinical Simulation in Nursing*, 7(3), 105-111. doi: 10.1016/j.ecns.2010.11.005

Simon R, Raemer D, Rudolph J. (2009). *Debriefing assessment for simulation in healthcare (DASH)© rater's handbook*. Center for Medical Simulation, Boston, Massachusetts.

Tannenbaum, S. & Cerasoli, C.P. (2013). Do team and individual debriefs enhance performance? A meta-analysis. *Human factors*, 55(1), 231-245. DOI:10.1177/0018720812448394

Watson, J. (n/d). Theory of Human Caring. [Presentation]. Retrieved from https://www.watsoncaringscience.org/images/features/library/THEORY%20OF%20HUMAN%20CARING_Website.pdf

Watson, J. (2008). *Nursing: The philosophy and science of caring* (rev. ed.), Boulder: University Press of Colorado.

Watson, J. (2006). Jean Watson's theory of human caring. In M. Parker (Ed.), *Nursing theories and nursing practice* (2nd ed). (295-302). Philadelphia, PA: F. A. Davis.

Appendix A

Definition of Terms

Advocacy-Inquiry (AI)- The AI method promotes students' critical reflection on their frames of reference (Faculty of Pharmacy and Pharmaceutical Sciences, University of Alberta, 2007).

Brief (Briefing) Pre-brief: An activity immediately preceding the start of a simulation activity where the participants receive essential information about the simulation scenario such as background information, vital signs, instructions, or guidelines (Lopreiato et al, 2016).

Clinical Scenario: The plan of an expected and potential course of events for a simulated clinical experience. Scenarios can vary in length and complexity depending on the learning objectives (Lopreiato et al, 2016).

DASH® tool (Debriefing Assessment for Simulation in Healthcare) The DASH® evaluates the strategies and techniques used to conduct debriefings by examining concrete behaviors. It is based on evidence and theory about how people learn and change in experiential contexts (Lopreiato et al, 2016).

Debrief (Debriefing): A formal, collaborative, guided reflective process within the simulation learning activity. This is where educators and learners re-examine the simulation experience for the purpose of moving toward assimilation and accommodation of learning to future situations (Johnson-Russell & Bailey, 2010); (NLN-SIRC, 2013).

Facilitator (Simulation Facilitator): An individual who is involved in the implementation and/or delivery of simulation activities. *For example, faculty, educators, etc.* (Lopreiato et al, 2016).

Guided Reflection: The process encouraged by the instructor during debriefing that reinforces the critical aspects of the experience and encourages insightful learning allowing the participant to link theory with practice and research (INACSL, 2013).

High-Fidelity Simulation: In healthcare simulation, high-fidelity refers to simulation experiences that are extremely realistic and provide a high level of interactivity and realism for the learner (INACSL, 2013).

Reflective Thinking: A process to assist learners in identifying their knowledge gaps and demonstrating the areas in which they may need further improvement; it requires active involvement in the simulation and facilitator guidance to aid in this process (Decker et al., 2013).

Safe Learning Environment: A learning environment of mutual respect, support, and respectful communication among leaders and learners; open communication and mutual respect for thought and action encouraged and practiced (Lopreiato et al, 2016).

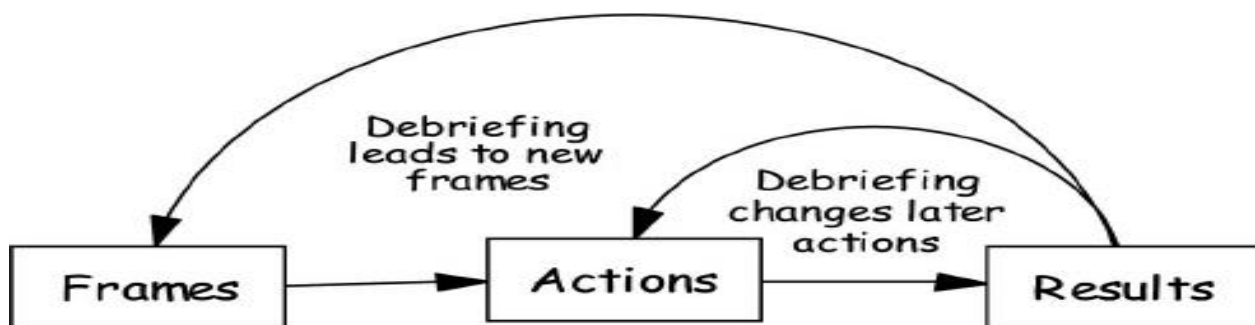
Simulation: A technique that creates a situation or environment to allow persons to experience a representation of a real event for the purpose of practice, learning, evaluation, testing, or to gain understanding of systems or human actions (Lopreiato et al, 2016).

Appendix B

Debriefing with Good Judgment

	Judgmental	Debriefing with Good Judgement
How facilitator views staff	Staff makes mistakes	Staff takes certain actions based on knowledge and assumptions.
Role of the facilitator	Provides directed feedback with the intention to change behavior	Tries to understand frames and creates a context for learning and change.
Typical message of debriefing	Here's how you messed up. "What do you think you could have done better?"	"I noticed X. I was concerned with that because of Y. Tell me what you were thinking at that time."

Rudolph JW et al (2007). Debriefing with good judgment: combining rigorous feedback with genuine inquiry. *Anesthesiology Clinic*. 25 (2),361-367.



Frames are invisible, but inferable; they are in the mind of trainees and of instructors. Actions (including speech) are observable. Most results (e.g., vital signs, order/ chaos) are also observable.

Rudolph JW et al (2007). Debriefing with good judgment: combining rigorous feedback with genuine inquiry. *Anesthesiology Clinic*. 25 (2),361-367.

Appendix C

Debriefing using the Advocacy-Inquiry method

Phase	Purpose	Process	Example Script
Pre-brief	<ul style="list-style-type: none"> • Prepare students for simulation • Sets the tone 	<ul style="list-style-type: none"> • Provide info on format • Provide observation guide • Review preceptor report 	Today I will provide a report for the patient you will care for as if I am the off going RN. You will then review the pre-brief worksheets as a group and come to a conclusion anticipating the needs of the patient based on diagnosis, history and current condition.
Debrief: React	<ul style="list-style-type: none"> • Encourage participation/build rapport • Allow learners to feel vulnerable, build trust, to save face 	<ul style="list-style-type: none"> • Debriefing with good judgement (see tool Appendix B) 	<ul style="list-style-type: none"> • What went well? • What would you do differently?
Debrief: Understand	<ul style="list-style-type: none"> • Uncover the ideas, thought processes and other factors that lead to a (student) behavior. • Helps the learner find ways to improve performance (come to a conclusion). 	Advocacy-Inquiry 1.Observe an event 2. Comment on the observation 3. Explore the Drivers behind the student thinking (their frames) 4. Discover with the student, ways to attend to issues to replicate positive results	1.You notice that the patient seemed to disengage when you were talking to him/her. 2. “I notice the patient crossed his arms and didn’t appear to be listening.” 3. “What do you think was happening?” 4. “I wonder how your team could approach recommendations to engage the patient to ensure clarity?”
Wrap-Up	Invite reflection on the experience	Inquire how the students feel and what they will take away	<ul style="list-style-type: none"> • How are you feeling? • What will you take away?

Lisa Guirguis and Cheryl Cox. University of Alberta Pharmacy Simulation Program. Framework adapted from: Rudolph J.W. Simon R., Rivard, p., Dufresne R.L., Raemer D.B.2007. Debriefing with good judgment: Combining rigorous feedback with genuine inquiry. *Anesthesiology Clinics* 25, 361376.doi: 10.1016/j.anclin. 2007.0

Appendix D



Debriefing Assessment for Simulation in Healthcare (DASH) Instructor Version[©]

Directions: Please provide a self-assessment of your performance for the introduction and debriefing in this simulation based exercise. Use the following rating scale to give a score to each of the six “Elements.” For each Element, component Behaviors are given that would indicate positive performance in that Element. Do your best to rate your *overall effectiveness for the whole Element* guided by the Behaviors that define it. If a listed Behavior is not applicable (e.g. how you handled upset people if no one got upset), just ignore it and don’t let that influence your evaluation. You may have done some things well and some things not so well within each Element. The Element rating is your *overall* impression of how well you executed that particular Element.

Element 1 assesses the introduction at the beginning of the simulation-based exercise. Elements 2 through 6 assess the debriefing.

Rating	1	2	3	4	5	6	7
Descriptor	Extremely Ineffective/ Detrimental	Consistently Ineffective/ Very Poor	Mostly Ineffective/ Poor	Somewhat Effective/ Average	Mostly Effective/ Good	Consistently Effective / Very Good	Extremely Effective / Outstanding

Skip this element if you did not conduct an introduction.

Element 1

I set the stage for an engaging learning experience

Rating Element 1

- I introduced myself, described the simulation environment, what would be expected during the activity, and introduced the learning objectives, and clarified issues of confidentiality
- I explained the strengths and weaknesses of the simulation and what the participants could do to get the most out of simulated clinical experiences
- I attended to logistical details as necessary such as toilet location, food availability and schedule
- I stimulated the participants to share their thoughts and questions about the upcoming simulation and debriefing and reassured them that they wouldn’t be shamed or humiliated in the process.

Appendix D (continued)

Element 2

I maintained an engaging context for learning

Rating Element 2

- I clarified the purpose of the debriefing, what was expected of the participants, and my role (as the instructor) in the debriefing
- I acknowledged concerns about realism and helped the participants learn even though the case(s) were simulated
- I showed respect towards the participants
- I ensured the focus was on learning and not on making people feel bad about making mistakes
- I empowered participants to share thoughts and emotions without fear of being shamed or humiliated

Element 3

I structured the debriefing in an organized way

Rating Element 3

- I guided the conversation such that it progressed logically rather than jumping around from point to point
- Near the beginning of the debriefing, I encouraged participants to share their genuine reactions to the case(s) and I took their remarks seriously
- In the middle, I helped the participants analyze actions and thought processes as we reviewed the case(s)
- At the end of the debriefing, there was a summary phase where I helped tie observations together and relate the case(s) to ways the participants could improve their future clinical practice.

Element 4

I provoked in-depth discussions that led them to reflect on their performance

Rating Element 4

- I used concrete examples—not just abstract or generalized comments—to get participants to think about their performance
- My point of view was clear; I didn't force participants to guess what I was thinking
- I listened and made people feel heard by trying to include everyone, paraphrasing, and using non-verbal actions like eye contact and nodding etc.
- I used video or recorded data to support analysis and learning
- If someone got upset during the debriefing, I was respectful and constructive in trying to help them deal with it

Appendix D (continued)**Element 5****I identified what they did well or poorly – and why****Rating Element 5**

- I provided concrete feedback to participants on their performance or that of the team based on accurate statements of fact and my honest point of view
- I helped explore what participants were thinking or trying to accomplish at key moments.

Element 6**I helped them see how to improve or how to sustain good performance****Rating Element 6**

Appendix E

Faculty Debrief Questionnaire Department of Nursing

Q1: Have you ever facilitated a post simulation debrief session? YES (7 respondents)

NO (1 respondent)

Q2. If so was it at this school of nursing or another nursing program? (Please include year)

(1 respondent)

Q3: What is your debriefing style or method?

a): I mostly review what the students did right or wrong and allow the students to ask questions

(1 respondent)

b): I focus on the skills and instruct the students to return to lab if needed **(0 respondents)**

c): I encouraged students to ask questions and I provided them the answers they need to perform safely **(6 respondents)**

d): I encouraged students to reflect on the stages of the simulation allowing them to come to a conclusion **(1 respondent)**

Q4: What is the purpose of the post simulation debrief?

a. ensures that the students know how to perform skills safely. **(0 respondents)**

b. provides opportunities for the faculty to instruct the students in the correct way to prioritize care. **(4 respondents)**

c. encourages participant to explore emotions, question, reflect and provide feedback to each other. **(2 respondents)**

d. allows students time to discuss errors **(2 respondents)**

Q5: Are you familiar with the phrase “Reflective Thinking”? If yes, please describe. (No-8 respondents)

Q6: How would you define *Debriefing with Good Judgment*? Overall theme- Not being judgmental

Q7: Would you support and be willing to participate in a practice initiative to transform the simulation process based on Best Practice?

a. support

b. support and participate **(All respondents- Yes)**

c. I am not sure, more information is needed.

Appendix F

SIMULATION EVALUATION TOOL

Simulation Experience _____ Date _____

Students 1 _____ 2 _____
3 _____ 4 _____

SLO	UNIVERSAL COMPETENCIES/SAFETY	Students 1&2	Students 3&4	DEBRIEF COMMENTS
8,10	Introduces self (name, title)			
	Uses 2 patient identifiers			
	Uses standard precautions (hand-wash, glove, PPE)			
	Assesses pain/comfort			
	Provides privacy			
	Provides for patient safety (call light, bed safety)			
	ASSESSMENT			
4	Student arrives prepared for simulation/Accessed assessment data			
	Obtains pertinent subjective data			
	Obtains pertinent objective data			
	Performs follow-up assessments as needed			
	Assesses in a systematic and orderly manner using the correct technique			
	COMMUNICATION			
5,6, 7,10	Communicates effectively with Interdisciplinary team (med terms/SBAR)			
	Communicates effectively with patient and S. O. (verbal, nonverbal, teaching)			
	Communicates and collaborates with nurse team			
	Promotes realism/professionalism			
	CLINICAL JUDGEMENT			
2,4, 10	Interprets vital signs and other critical parameters			
	Initiates and prioritizes appropriate interventions			
	Delegates appropriate tasks when needed			
	Interprets subjective/objective data (recognizes relevant from irrelevant data)			
	DIRECT PATIENT CARE			
3,8, 10	Safe med administration (6 rights, 3 checks)			
	Manages equipment, tubes and drains			
	Performs procedures correctly and timely			

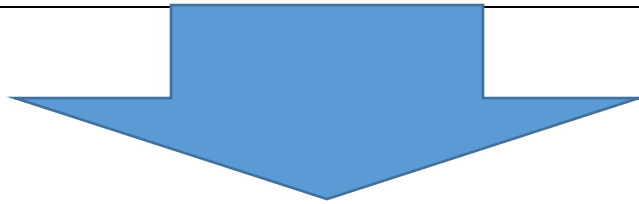
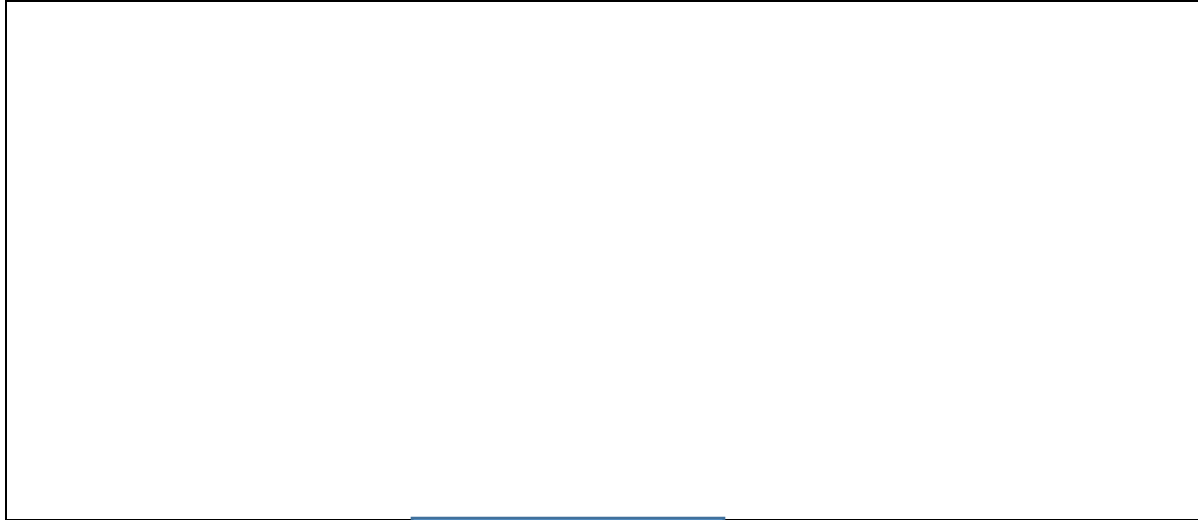
Key: C=Complete I= Incomplete

Simulation Incomplete: At the discretion of the faculty, student(s) who receive an incomplete for their simulation may be provided with an evaluation of their performance noting which of the above areas are in need of improvement. Depending on the area needing improvement the student(s) will have an opportunity to repeat a simulation or remediate in the laboratory.

Approved 8/2017


Appendix G**Structured Pre-brief Worksheet**

- A. From the information that you have been given for this scenario, what have you noticed about this patient and their care so far? Consider the situation and learning objectives?



- B. From what you have noticed about this patient and their care so far, what can you interpret about the patient's situation based on your knowledge and experience? There may be several possibilities to think about. Drawing on your own knowledge, note how you made your interpretation(s), and if you need to further assess for missing information.

Interpretation #1	Interpretation #2	Interpretation #3
Rationale	Rationale	Rationale
Other Information	Other Information	Other Information




Appendix G (continued)

C. From what you have interpreted what can be reasonably anticipated for each possibility (what may happen)? How could you respond in each of these situations to the patient's needs? List your anticipated plan(s) and modify accordingly with your team. Note the rationale for each.

(a) Plan for nursing care

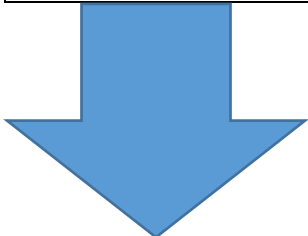
Response #1	Response #2	Response #3
Rationale	Rationale	Rationale



How could others respond? What do you anticipate you made need from others?

(b) Plan for communication with other health care providers

Needs?	Needs?	Needs?
Rationale	Rationale	Rationale



Reflect on these anticipated responses now and how you are feeling. Then, as you engage in the upcoming scenario and in the safe care of the patient, conduct your assessment of the patient's situation and select the appropriate responses based on what you find. You may need to modify as new information arises. Discuss this in the debrief.

Appendix H

Clinical Simulation “Incomplete”

Name: _____ Date: _____

Simulation experience incomplete for the following reason(s):

The student did not (Please circle)

1. Report to the Simulation Lab on time for the simulation.
2. Come prepared. This includes completion of all pre-assignments and the ability to demonstrate beginner RN competencies.
3. Wear their student nurse uniform and ID badge and comply with the dress code policy and procedure described in the student handbook.
4. Exhibit professional behavior at all times. This includes interactions with the simulated patient and other participants.
5. Speak to the mannequin as if he/she were a real person at all times.
6. Actively participate in their assigned role.
7. Successfully meet the Universal Competencies and or SLO's for the simulation

At the discretion of the faculty student(s) who receive an incomplete for their simulation will be provided an evaluation of their performance noting which of the above areas are in need of improvement. Depending on the area needing improvement the student(s) will have an opportunity to repeat a simulation or remediate in the laboratory.

Student Signature _____ Date _____

Faculty Signature _____ Date _____

Comments:

Recommendations:

Repeat Simulation _____ (Faculty name)

Date _____

Return to Lab Remediation _____ (Faculty name)

Date _____

Please provide a copy of this document to the Simulation Coordinator followed by this original document after student has completed activity.

Approved 5/2017